

Policy & Formulation Issues in Urban River Restoration Planning

Presented at USACE Economic and Environmental Analysis Conference:
TOWARD INTEGRATED WATER RESOURCES MANAGEMENT
April 15, 2004, Baltimore, Maryland

Policy Issues I

In degraded, urban riverine environments:
“Restoration” has a different meaning than in more remote areas

- Human Welfare Impacts tend to dominate the evaluation of ecological improvements
 - Direct economic benefits: e.g., boating (including dinner/tour boats), aquatic sporting events, etc.
 - Indirect economic benefits: aesthetic and recreational improvements encourage urban revitalization

Policy Issues II

In degraded, urban riverine environments:

- Problems/solutions are more complex than traditionally addressed by Civil Works planning
 - More than manipulation of hydrology
 - More than integration of water quality impacts
 - Involve authorities and programs beyond Civil Works
 - Potential solutions can have important transient impacts

The Principles and Guidelines

- The P & G is the only Federal planning model with an open-ended specification of planning objectives
- The fundamental essential requirement of the P&G is “incremental analysis”
- Requires systematic approach to informing selections of
 - the best scale of investment to achieve . . .
 - the best mix of benefits by implementing . . .
 - the best mix of measures

The P&G is poorly understood

- “Incremental analysis” is obscure to most stakeholders
- Bright line standards vs. benefits-based approach
 - Many Federal and State agencies, in part because of their organic authorities, do not think of problem solving as a balancing of “benefits” and “costs”

Associate Justice Stephen Breyer:

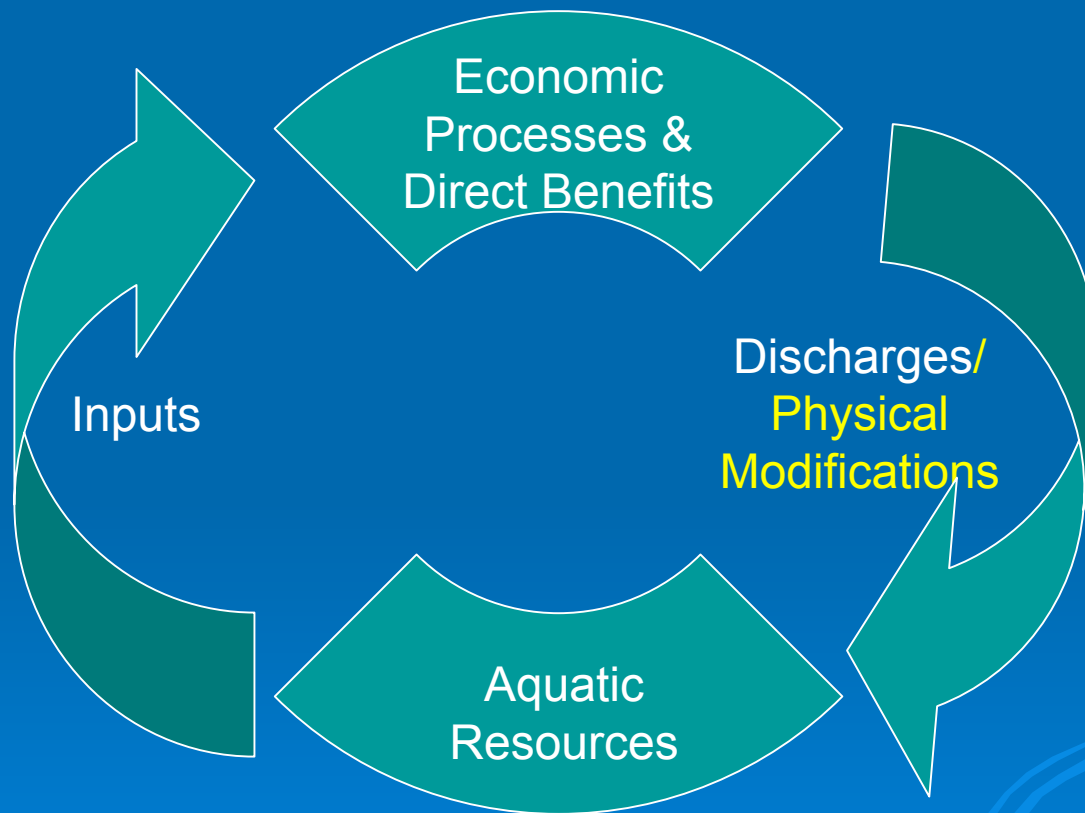
"Economic reasoning is often difficult to reconcile with bright-line rules. Economics often concerns gradations, with consequences that flow from a little more or a little less. But the law, at least in a final appeals court, often seeks to create clear distinctions of kind. "

AEI-Brookings Joint Center for Regulatory Studies
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Ecological and Economic Systems Relationships

- Aquatic resources produce direct economic benefits
 - Bird watching, fishing, other recreational and commercial activities
- Aquatic resources are inputs to economic processes and activity
 - Water supply, transportation, enhanced aesthetics
- Aquatic systems have been significantly altered by economic activity
 - Waste- and storm-water discharges
 - Physical changes associated with development

Aquatic Resources and Economic Activity



Anticipated Urban River Restoration Planning Challenges

- Gaining agreement on using the “P&G” logic
- Establishing the “without action” project condition
- Finding / developing necessary physical, chemical, biological models and data
- Identifying measures to be considered
- Measuring ecological and economic benefits
- Reaching agreement on the components of the “best” plan

Lower Passaic River as Case Study

The Passaic River Restoration Initiative – “PRRI”

- D&A working with technical experts to develop an illustration of a comprehensive plan based on systematic incremental b/c analysis for our client, Tierra Solutions
- The Principles and Guidelines and Corps Planning Guidance Notebook provide the framework; D&A provides advice and interpretative guidance

PRRI Area - - Current Status

- Historic ecological resources destroyed or severely degraded by 200 years of urban and industrial growth
 - Hydrologic and physical modifications including widespread filling, damming and channelizing
 - Water and sediments containing many pollutants including dioxin, PCBs, heavy metals, and disease-causing pathogens
 - On-going point and non-point discharges of pollutants.

PRRI Area - - Current Status

(cont'd)

- Limited public access to river
- Much public and environmental group interest
- CERCLA and State regulatory processes in play
 - Growing group of Cooperating Parties
 - Growing awareness of public nexus
- PRRI is COE/EPA Pilot Project under Urban River Restoration Initiative (URRI)

PRRI: Anticipating Issues / Learning Lessons

- Planning framework
 - “Without action” condition
- Models and data
- Measures to be evaluated
- Benefits presentation
- Agreeing on the “best” plan

PRRI: Establishing the “Without Action” Condition

- What is “most likely” scenario?
- What is most analytically useful scenario?
 - Benefits of accelerating planned investments as a result of PRRI, compared to “without action” could become an important finding
 - Some “planned investments” may not make “sense”
- A minimalist “without-action” condition allows the most comprehensive analysis

PRRI: Models & Data

- Extensive physical, chemical and biological data are available
- Relevant and useful ecological and economic evaluation models are available
- Uncertainty needs to be explicitly considered
- Some new evaluation techniques are needed

PRRI: Identifying Restoration Measures

- Many plans for the Passaic have been advanced by various stakeholders
 - Need to maintain stakeholder interest and involvement
 - Every idea is worthy of consideration
- Some measures--such as those dealing with contaminated sediments--have a lot of uncertainty about their effectiveness or longevity
 - Consider ongoing sources
 - Be sure costs to be incurred will achieve ultimate benefit desired

Evaluation of Benefits

- Conventional Corps economic and ecological evaluation measures are not adequate to address all concerns
- Human health impacts of pollutants and contaminants are major issues in law and in the public's perceptions
- Need to integrate risk assessments and benefit evaluations into planning process

URRI: Integrating Human Health Into “Project Purposes” Matrix

- “Ecological Restoration” should be interpreted and applied in urban context
- Different value metrics are required
- Impacts of restoration measures can be treated as either reductions in risk in the NER/Environmental Quality Account or, if monetized, in the National Economic Development Account

Economic Benefits (and Costs)

- Many likely economic benefits (e.g., associated with recreation) traditionally are considered “low priority”
- Local and regional impacts or “benefits” may be important to political success of project
- Dramatic changes such as acceleration and enhancement of urban redevelopment are difficult to attribute to a single factor

Choosing the “Best Restoration Plan”

- Myriad of Federal and State Laws and Programs relate to the planning effort
 - Including CERCLA, CWA, WRDA.
- Corps contribution should be two-fold:
 - To integrate all stakeholders into the process
 - A formal Partnering Agreement.
 - To inform decision-making and consensus building through systematic incremental analysis
 - Utilize the P&G planning process

Summary & Conclusions

- Urban river restoration is the most complex of new Corps mission areas
- The P&G provide the best framework for informed discussion, understanding and decision-making regarding the necessary and inevitable trade-offs in benefit and cost analysis
- A *Partnering Agreement* can integrate the stakeholders into the cooperative development of a recommended restoration plan